CLAIMS

What is claimed is:

1. A write once disc including a lead-in zone, a data area, and a lead-out zone, the disc comprising:

a predetermined area storing area allocation information that indicates whether at least one section of the data area is allocated for disc defect management.

2. The disc of claim 1, wherein the area allocation information comprises information specifying a size of the at least one section of the data area.

3. The disc of claim 1, wherein the section allocated to the data area for disc defect management includes at least one of a spare area, a temporary disc defect structure (TDDS) area, a temporary defect list (TDFL) area, and a temporary defect management area (TDMA).

4. The disc of claim 1, further comprising:

a space bit map (SBM) information area in which data recording area information is recorded,

wherein the data recording area information contains header information and a bitmap that indicates areas containing data.

5. The disc of claim 4, wherein when the area allocation information is recorded in a predetermined cluster of the predetermined area, a bit of the bitmap corresponding to the predetermined cluster is recorded as a predetermined value that indicates the predetermined cluster contains data.

6. The disc of claim 4, wherein the header information comprises a finalization flag that indicates whether more data is recordable on the disc.

7. The disc of claim 3, wherein the predetermined area in which the area allocation information is recorded is the TDDS area.

8. The disc of claim 7, further comprising a defect management area (DMA) in which the area allocation information recorded in the TDDS area is copied when the data area does not include an area for disc defect management.

9. The disc of claim 1, further comprising:

a first temporary defect management area (TDMA) formed in the lead-in zone; and

a second TDMA formed in the data area,

wherein the area allocation information indicates allocation of the second TDMA to the data area, and the predetermined area in which the area allocation information is recorded is one of the first and second TDMAs.

10. The disc of claim 9, wherein the first TDMA is an area in which an updated TDDS is recorded at least once before ejecting the disc from a recording and/or reproducing apparatus, and

the second TDMA is an area in which the updated TDDS is recorded in units of predetermined operations during which data is recorded.

11. The disc of claim 1, wherein the area allocation information is recorded in at least one cluster of the predetermined area and updated area allocation information is recorded in at least one different cluster of the predetermined area.

12. A method of managing a data area of a write once disc, comprising:

receiving an instruction regarding whether allocation of at least one section of the data area of the disc for disc defect management is required; and

recording area allocation information, which indicates whether the at least one section of the data area is allocated for disc defect management, in a predetermined area of the disc.

13. The method of claim 12, wherein the recording the area allocation information comprises recording information specifying a size of the at least one section of the data area.

14. The method of claim 12, wherein the recording of the area allocation information comprises recording the area allocation information in a temporary disc defect structure (TDDS) area formed in at least one of a lead-in zone, the data area, and a lead-out zone of the disc.

15. The method of claim 12, further comprising:

recording information regarding a data recordable area,

wherein the information regarding a data recordable area comprises header information and a bit map that indicates areas containing data.

16. The method of claim 15 wherein the recording of the information regarding the data recordable area comprises recording a bit value of the bit map corresponding to a predetermined area that contains data indicating whether the at least one section of the data area is allocated, as a predetermined value indicating an area containing data.

17. The method of claim 15, wherein the header information comprises a finalization flag that indicates whether more data is recordable on the write once disc.

18. The method of claim 13, wherein the recording the area allocation information comprises recording the area allocation information to indicate the size of the at least one section as 0 when the at least one section of the data area is not allocated.

19. The method of claim 12, further comprising:

recording the area allocation information, which is recorded in a temporary defect management area (TDMA), in a defect management area (DMA).

20. The method of claim 12, wherein the at least one section of the data area comprises at least one of a spare area, a TDDS area, a TDFL area, and a TDMA.

21. The method of claim 12, wherein the recording the area allocation information comprises recording the area allocation information, which indicates allocation of a second TDMA to the data area, in one of a first TDMA and the second TDMA which are formed in a lead-in zone of the disc.

22. The method of claim 21, wherein the first TDMA is an area in which an updated TDDS is recorded before ejecting the write once disc from a recording and/or reproducing apparatus, and

the second TDMA is an area in which the updated TDDS is recorded in units of predetermined operations during which data is recorded.

23. The method of claim 12, further comprising:

updating the area allocation information by recording area allocation information, which specifies a change in a size of the at least one section, in a predetermined area in response to a command that instructs the size of the at least one section to be changed.

24. The method of claim 14, wherein during the recording the area allocation information, the area allocation information is recorded in at least one cluster starting from a start of the TDDS.

25. A recording and/or reproducing apparatus, comprising:

a recording and/or reproducing unit which records data on or reads data from a write once disc; and

a controller which controls the recording and/or reproducing unit to record area allocation information, which indicates whether at least one section of a data area of the disc is allocated for disc defect management, in a predetermined area of the disc, in response to an instruction regarding whether allocation of the at least one section to the data area is required.

26. The apparatus of claim 25, wherein the area allocation information includes information specifying a size of the at least one section.

27. The apparatus of claim 25, wherein the controller controls the recording and/or reproducing unit to record the area allocation information in a temporary disc defect structure (TDDS) formed in at least one of a lead-in zone, the data area, and a lead-out zone of the disc.

28. The apparatus of claim 25, wherein the controller controls the recording and/or reproducing unit to record information regarding a data recordable area in a predetermined area of the disc,

wherein the information regarding the data recordable area comprises a bitmap indicating header information and the data recordable area.

29. The apparatus of claim 28, wherein the controller controls the recording and/or reproducing unit to record a bitmap value, which corresponds to the predetermined area storing the area allocation information indicating whether the at least one section of the data area is allocated, as a predetermined value indicating an area containing data.

30. The apparatus of claim 28, wherein the header information comprises a finalization flag indicating whether more data is recordable on the disc.

31. The apparatus of claim 26, wherein the controller controls the recording and/or reproducing unit to record the area allocation information indicating a size of the at least one section as 0 when the at least one section of the data area is not allocated.

32. The apparatus of claim 25, wherein the controller controls the recording and/or reproducing unit to record the area allocation information, which is recorded in a temporary defect management area (TDMA), in a defect management area (DMA).

33. The apparatus of claim 25, wherein the at least one section comprises at least one of a spare area, a TDDS area, a TDFL area, and a TDMA.

34. The apparatus of claim 25, wherein the controller controls the recording and/or reproducing unit to record the area allocation information, which indicates allocation of a second TDMA to the data area, in one of a first TDMA and the second TDMA which are formed in a lead-in zone of the disc.

35. The apparatus of claim 34, wherein the first TDMA is an area in which updated TDDS is recorded at least once before the disc is ejected from the recording apparatus, and

the second TDMA is an area in which the updated TDDS is recorded in predetermined operation units.

36. The apparatus of claim 25, wherein the controller controls the recording/reproducing unit to record the area allocation information, which includes information specifying a size of the at least one section, in the predetermined area of the disc, in response to a command that instructs the at least one section to be changed.

37. The apparatus of claim 27, wherein the controller controls the recording/reproducing unit to record the area allocation information in at least one cluster starting from a start of the TDDS.

38. A method of reproducing data from a write once disc, comprising:

accessing a predetermined area of the disc to read area allocation information; and

obtaining information regarding a location of at least one section of a data area of the disc, which is allocated for disc defect management, from the area allocation information.

39. The method of claim 38, wherein the area allocation information comprises information specifying a size of the at least one section.

40. The method of claim 38, wherein the predetermined area storing the area allocation information is a TDDS area formed in at least one of a lead-in zone, the data area, and a lead-out zone of the disc, and

wherein the area allocation information is included in the TDDS.

41. The method of claim 38, wherein the at least one section comprises at least one of a spare area, a TDDS area, a TDFL are, and a TDMA.

42. An apparatus reproducing data from a write once disc, comprising:

a reading unit which reads data from the disc; and

a controller which controls the reading unit to access a predetermined area of the disc to read area allocation information and obtain information regarding a location of at least one section of a data area of the disc, which is allocated for disc defect management, from the area allocation information.

43. The apparatus of claim 42, wherein the area allocation information comprises information specifying a size of the at least one section.

44. The apparatus of claim 42, wherein the predetermined area storing the area allocation information is a TDDS area formed in at least one of a lead-in zone, the data area, and a lead-out zone of the disc, and

the area allocation information is included in the TDDS.

45. The apparatus of claim 42, wherein the at least one section comprises at least one of a spare area, a TDDS area, a TDFL area, and a TDMA.

46. A write once disc with at least one record layer, comprising:

at least one data area which stores user data; and

at least one predetermined area which stores area allocation information, which indicates whether at least one section of the at least one data area is allocated for disc defect management.

47. The disc of claim 46, wherein the area allocation information comprises information specifying a size of the at least one section.

48. The disc of claim 46, wherein the at least one section comprises at least one of a spare area, a TDDS area, a TDFL area, and a TDMA.

49. The disc of claim 46, wherein the area allocation information indicates a size of the at least one section as 0 when the at least one section of the data area is not allocated.

50. A recording medium, comprising:

a first area having a first predetermined size storing defect management information;

a second area having a second predetermined size used to record user data; and

a third area having a third predetermined size storing data replacing defective units detected within the second area based on the defect management information, wherein the second area is adjacent to the first area.

51. The recording medium of claim 50, wherein the first area is at least one of a lead-in area and a lead-out area on the recording medium.

52. The recording medium of claim 50, wherein the first, second, and third predetermined sizes of the respective corresponding areas of the recording medium are changed by reinitializing the recording medium to update the respective predetermined sizes.

53. The recording medium of claim 52, wherein when defect management will not be performed the predetermined size of the third area is set to zero to maximize the size of the second area.

54. The recording medium of claim 50, wherein the recording medium is a write once optical disc.

55. The recording medium of claim 54, wherein the first area is at least one of a lead-in area and a lead-out area on the write once optical disc.

56. The recording medium of claim 55, wherein the first area is divided into a plurality of defect management areas positioned adjacent to each other.

57. The recording medium of claim 56, wherein the first, second, and third predetermined sizes of the respective corresponding areas of the write once disc are changed by reinitializing the write once disc to update the respective predetermined sizes.

58. The recording medium of claim 57, wherein when defect management will not be performed the predetermined size of the third area is set to zero to maximize the size of the second area.

59. The recording medium of claim 56, wherein at least one of the plurality of defect management areas is a space bit map area specifying bit map information corresponding to a data recordable area, wherein a recording/reproducing apparatus is able to quickly access a desired area.